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AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph at page 23, line 17 – page 24, line 17 with the following paragraph.

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- A process satisfies the  $A \wedge B$  formula if and only if it satisfies both the  $A$  and the  $B$  formula.
- A process satisfies the  $A \Rightarrow B$  formula if and only if either it does not satisfy the  $A$  formula or it satisfies the  $B$  formula.
- A process satisfies the  $A \Leftrightarrow B$  formula if and only if it satisfies neither or both the  $A$  and  $B$  formulas.
- A process  $P$  satisfies the  $A \mid A'$  formula if and only if for every decomposition of  $P$  into processes  $P'$  and  $P''$  such that  $P \equiv P' \mid P''$ , either  $P'$  satisfies  $A$  or  $P''$  satisfies  $A'$ .
- A process  $P$  satisfies the  $!A$  formula if and only if every parallel component  $P'$  of  $P$  (such that  $P \equiv P' \mid P''$ , including  $P' = 0$ ) satisfies the  $A$  formula.
- A process  $P$  satisfies the  $?A$  formula if and only if there is a parallel component  $P'$  of  $P$  (such that  $P \equiv P' \mid P''$ ) that satisfies the  $A$  formula.
- A process  $P$  satisfies the formula  $\forall n.A$  if and only if for every name  $m$ ,  $P$  satisfies  $A\{n \leftarrow m\}$ .
- A process  $P$  satisfies the formula  $\sqsubset A$  if and only if  $A$  holds at every location  $P'$  within  $P$ , where "sublocation" is defined by  $P \downarrow *P'$ .
- A process  $P$  satisfies the formula  $\Box A$  if and only if  $A$  holds in the future for every residual  $P'$  of  $P$ , where "residual" is defined by  $P \rightarrow *P'$ .
- A process  $P$  satisfies the formula  $A @$  if and only if, when placed in any ambient  $n$ , the combination  $n[P]$  satisfies  $A$ .
- A process  $P$  satisfies the formula  $\triangleright A$  if and only if for every process (i.e., for every context) the combination of  $P$  and with that process satisfies  $A$ .
- If process  $P$  satisfies the formula  $A \triangleright B$ , it means that in every context that satisfies  $A$ , the combination (of  $P$  and the context) satisfies  $B$ . Instead, if process  $P$  satisfies the formula  $\triangleright(A \Rightarrow B)$ , it means that in every context, if and only if the combination satisfies  $A$  then the combination satisfies  $B$ .

Please replace the paragraph at page 28, line 9 with the following paragraph.

( $\Diamond$ )	$\nVdash \Diamond A \vdash \Leftrightarrow \neg \Box \neg A$	( $\Diamond \boxtimes$ )	$\nVdash \Diamond \boxtimes A \vdash \Leftrightarrow \neg \Box \neg A$
( $\Box K$ )	$\nVdash \Box(A \Rightarrow B) \vdash \Rightarrow (\Box A \Rightarrow \Box B)$	( $\Box K$ )	$\nVdash \Box(A \Rightarrow B) \vdash \Rightarrow (\Box A \Rightarrow \Box B)$
( $\Box T$ )	$\nVdash \Box A \vdash \Rightarrow A$	( $\Box T$ )	$\nVdash \Box A \vdash \Rightarrow A$
( $\Box 4$ )	$\nVdash \Box A \vdash \Rightarrow \Box \Box A$	( $\Box 4$ )	$\nVdash \Box A \vdash \Rightarrow \Box \Box A$
( $\Box \vdash M$ )	$A \vdash B \nVdash \Box A \vdash \Box B$	( $\Box \vdash M$ )	$A \vdash B \nVdash \Box A \vdash \Box B$
( $\Box \wedge$ )	$\Box(A \wedge C) \vdash B // \Box A \wedge \Box C \vdash B$	( $\Box \wedge$ )	$\Box(A \wedge C) \vdash B // \Box A \wedge \Box C \vdash B$
( $\Box \vee$ )	$A \vdash \Box(C \vee B) // A \vdash \Box C \vee \Box B$	( $\Box \vee$ )	$A \vdash \Box(C \vee B) // A \vdash \Box C \vee \Box B$

Please replace the paragraph at page 34, lines 6-10 with the following paragraph.

In 308 specifically, all of the names of the process are determined. Then, it is verified that a name exists for the formula that is unequal to any of the names of the process. If this verification fails, then the process itself fails against the policy. The check of 308 only applies if the formula is an existential quantification  $\nVdash \exists x.A$ . This check can be expressed as:

Please replace the paragraph at page 34, line 11 with the following paragraph.

*Check*( $P, \nVdash \exists x.A$ ) @ let  $\{m_1, \dots, m_k\} = fn(P) \cup fn(A)$  in  
 let  $m_0 \notin \{m_1, \dots, m_k\}$  be some fresh name in  
 $\begin{cases} \mathbf{T} & \text{if } Check(P, A\{x \leftarrow m_i\}) \text{ for some } i \in 0..k \\ \mathbf{F} & \text{otherwise} \end{cases}$